

## Optimised patterns for square solar cells with tabs for better cell efficiency

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**Abstract.** The metallisation pattern for the front side for a typical crystalline silicon solar cell with screen printed metallisation. In this paper a 12.5 x 12.5 cm<sup>2</sup> cell with two tabs is considered. The finger distance  $s$  for a H-grid pattern with our procedure. During the process it has been observed that the smeared out metallisation has uniform thickness and is characterised by a single parameter. The optimal pattern is determined by the cell geometry, the location of the interconnections of the pattern to the tabs, the irradiance condition for the maximum power point like  $V_{mpp} J_{mpp}$ , the characteristics of metallisation technique.

**Keywords.** H-grid metallisation pattern, smeared out metallisation, shadow fraction, series resistance.

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